

NOTES ON A COLLECTION OF BIRD-SKINS
FORMED BY MR. E. G. HERBERT, C.M.Z.S., M.B.O.U.

(continued from p. 216).

109. PRATINCOLA TORQUATA PRZWALSKII.

Pratincola maura, var. *Przewalskii*, Pleske, Wiss. Res. Przewalskii, Rieser, Vogel, i, p. 46 (1889).

♂ juv., ♂, 2 ♀ Krabin, C. Siam, 14-17.11.15.

♂ Maprit, P. Siam, 1.1.16.

2 ♂ ♀ Samkok, C. Siam, 14-17.3.16.

I place these birds provisionally under this name, but their position is very doubtful, as is often the case with many migrant specimens of *Pratincola*. They are typically large birds, the males having wings over 72 mm. and the females between 67 and 69 mm. This is an extremely common breeding bird over the whole of the Himalayas and northern Burmese hills, and from the huge mass of material in the British Museum of migratory birds in India, Burma and China it is easy to pick out series which would agree with any one of the three forms supposed to come within these limits. In spite of their large size, the white on the sides of the neck and on the breast is very extensive, and the under parts seem very pale when compared with typical *przewalskii*.

110. HYDROCICHLA FRONTALIS.

Enicurus frontalis, Blyth, J. A. S. B. xvi, p. 156 (1847).

♂ ♀ Tung Song, P. Siam, 12.9.15.

111. HYDROCICHLA RUFCAPILLA.

Enicurus ruficapillus, Temm. Pl. Col. iii, pl. 534 (1832).

♂ juv. ♀ Tung Song, P. Siam, 16-18.9.15.

The young male is like an adult female, and shews no signs of spots or of having been spotted.

112. LARVIVORA CYANEA.

Motacilla cyanea, Pall. Reis. Russ. Reichs. iii, p. 637 (1776).

♂ Klong Wang Hip, P. Siam, 3.10.15.

♀ Krabin, C. Siam, 5.11.15.

♀ Maprit, P. Siam, 30.12.15.

♂ ♀ Klong Bang Lai, P. Siam, 16-18.1.16.

113. *CITTOCINCLA MACROURA MACROURA*.

Turdus macrourus, Gmel. S.N. i, p. 820 (1788).

♂ Hup Bon, S. E. Siam, 21.7.15.

♂ Muak Lek, E. Siam, 23.8.15.

♀ Tung Song, P. Siam, 19.9.15.

♀ ♂ Klong Wang Hip, P. Siam, 30.9 and 4.10.15.

2 ♂ Krabin, C. Siam, 2-9.11.15.

I can see no difference between these birds and typical Indian specimens either in size or colouration. Indeed, in so far as the material in the British Museum is concerned, I cannot divide the two races *macroura* and *tricolor*. As far as I can see the males of the two supposed races do not differ in the least from one another, and in both, the measurements of the wing vary from 89 to 101 mm.

Slater's *suavis* is named by him on a short tailed specimen with a small wing of 91 mm., which he presumes to be a female, but which had not been sexed by the collector. In the same way Sharpe presumed his specimens also to be females, though he has given no reasons for his presumption, and the specimens had never been sexed. The males of *suavis* run from 97 to 102 mm., and the spot of black on the outermost tail feather is almost invariably very small.

114. *GEOCICHLA CITRINA INNOTATA*.

Geocichla innotata, Blyth, J. A. S. B. xv, p. 370 (1846).

♂ Maprit, 9.1.16. (big white spot.)

2 ♂ 2 ♀ Klong Bang Lai, P. Siam, 16-20.1.16. (Two spotted and two unspotted.)

The above series might really be called either *citrina* or *innotata*, as they are half the one and half the other. Over practically the whole of northern and central Siam *G. c. citrina* is the only form found, but in Peninsular Siam and Burma birds with, and birds without, the spot are found in about equal numbers until the extreme south of Siam is reached, when only the latter form is met with. On the other hand in eastern Burma there are well spotted specimens to be met with as far north as Karenni.

115. *MONTICOLA SOLITARIA PHILIPPENSIS.*

Turdus philippensis, Muller, Nat. Sys. Anhung, p. 142 (1776).

♂ Maprit, P. Siam, 31.12.15.

This bird answers exactly to Hartert's description (Vog. Pal. p. 675), but the variation found in *M. solitaria* over the greater part of the centre of its range is enormous, and probably there are really only two recognisable sub-species of this thrush.

116. *PLOCEUS PHILIPPINUS INFORTUNATUS.*

Ploceus passerinus infortunatus, Hart. Nov. Zool. ix, p. 579 (1902).

2 ♀ Samkok, C. Siam, 19.6.15.

2 ♂ Meklong, C. Siam, 26.6.15.

Mr. Herbert's specimens agree well with Hartert's diagnosis of his *infortunatus*, having wings between 66 and 70 mm. But a series of birds collected by Mr. Williamson at Bangkok are all very big, running from 70 to 74 mm.

117. *MUNIA ATRICAPILLA ATRICAPILLA.*

Loxia atricapilla, Vieill. Ois. Chant. p. 84, pl. 53 (1805).

♂ Meklong, C. Siam, 27.6.15.

In appearance this particular individual is perhaps nearer *rubronigra* than *atricapilla*, but as the great majority of birds from this portion of Siam are much closer to the latter form I leave it provisionally under that name.

118. *UROLONGHA ACUTICAUDA ACUTICAUDA.*

Munia acuticauda, Hodgs. As. Rev. xix, p. 153 (1836).

♂ Pak Jong, E. Siam, 20.8.15.

♂ Muak Lek, E. Siam, 25.8.15.

Both these specimens are typical *acuticauda*, quite inseparable from northern Indian birds.

In working through the long series of this *Munia* in the Museum collection, I was struck with the fact that both Formosan and Hainan birds, which have hitherto been placed under the name *U. a. squamicollis*, are really far closer to *U. a. acuticauda* than they are to that bird, and if they are not deemed worthy of a separate name to themselves should bear the Indian name.

119. PASSER MONTANA SATURATA.

Stjn. Pro. U. S. Mus. viii, p. 19 (1885).

♀ Bangkok, 14.3.16.

120. HIRUNDO RUSTICA GUTTURALIS.

Hirundo gutturalis, Scop. Del. Flor. et Faun. Insubr. ii, p. 96 (1786).

♂ Samkok, C. Siam, 29.8.15.

3 ♂ 3 ♀ Bangkok, 10.2 to 14.3.16.

121. MOTACILLA BOARULA MELANOPE.

Motacilla melanope, Pall. Reis. Russ. Reichs, iii, p. 696 (1776).

o Muak Lek, E. Siam, 24.8.15.

122. DENDROGNATHUS INDICUS.

Motacilla indica, Gmel. S. N. i, p. 962 (1788),

2 ♂ Muak Lek, E. Siam, 22.8.15.

♀ Samkok, C. Siam, 30.8.15.

♀ Samray, Bangkok, 16.12.15.

123. ANTHUS MACULATUS.

Anthus maculatus, Hodgs. in Gray's Zool. Misc. p. 83 (1844).

2 ♂ ♀ Krabin, C. Siam, 13-14.11.15.

I have shewn elsewhere (Bull. B.O.C. xxxvii, p. 44, 1917) that *maculatus* cannot be considered the Eastern form of *trivialis*, as Witherby has named a discovery of Harington's *Anthus trivialis haringtoni*, which breeds within the same area in the Himalayas as that within which *maculatus* regularly nests.

124. ANTHUS RICHARDI RICHARDI.

Anthus richardi, Vieill. Nouv. Dict. d'Hist. Nat., xxvi, p. 491 (1818).

♂ Krabin, C. Siam, 13.11.15.

This is a rather small bird with a wing of only 92 mm., but has the huge claw to the hind-toe of *richardi*, full 19 mm. long, and also a well-developed white penultimate tail feather.

125. ANTHUS RICHARDI RUFULUS.

Anthus rufulus, Vieill. Nouv. Dict. d'Hist. Nat., xxvi, p. 494 (1818).

4 ♂ Bangkok, 30.6 to 11.7.15.

♂ ♀ Samkok, C. Siam, 31.8.15 and 17.3.16.

♂ Krabin, C. Siam, 30.10.15.

I cannot define any distinction between the birds of this series and others from S. India, Assam, Bengal and Upper Burma.

This Pipit is remarkably constant in size throughout the whole of its range; the usual laws creating small races in the south and large ones in the north do not seem to operate in respect to this species nor can I trace any deepening of colour in humid countries with a corresponding loss of colour in dry and desert areas.

126. *MIRAFRA CANTILLANS WILLIAMSONI*.

Baker, Bull. B. O. C. No. cex, p. 9. (1915).

5 ♂ Bangkok, 16.6 to 11.7.15.

♀ Sansep, Bangkok, 3.7.15.

♂ Samkok, C. Siam, 30.8.15.

The above 7 birds completely bear out my diagnosis of the sub-species made by me in the Bulletin, the wings of the series varying between 66 and 73 mm. There is, however, another *Mirafra cantillans* specimen obtained by Mr. Herbert on the 20th June at Samkok, which is very different to the rest. It is a huge bird with a wing of 82 mm. and though very similar in general appearance to the others, is unusually richly coloured, and has very red wings. For the present I cannot place this specimen. It is possibly only an aberrant specimen of *williamsoni*, for we cannot have two breeding races in the same area, but similar specimens should be carefully watched for and recorded.

127. *MIRAFRA ASSAMICA MARIONÆ*.

Baker, Bull. B. O. C. No. ccxi, p. 34 (1915).

♂ Chan Teuk, E. Siam, 13.7.15.

♂ ♀ Krabin, C. Siam, 4.11.15.

The colouration of the above three specimens agrees well with those described in the Bulletin, but the wings measure 73, 77 and 78 mm. respectively, making the average, for the five, 75.5 mm. The smallest *assamica* I have measured has a wing of 82 mm., and they run up to over 89.0 mm.

128. *ALAUDA GULGULA SALA*.

Alauda sala, Swinh. Ibis, p. 354 (1870).

♀ Sansep, Bangkok, 3.7.15.

This small Sky-Lark appears to be a very common breeding bird in Siam, where Williamson collected a fine series. The present specimen has a wing of 73 mm.

129. *ÆTHOPYGA SEHERIE CARA*.

Aethopyga cara, Hume, S. F. ii, p. 473 (1874).

♂ Maprit, P. Siam, 31.12.15.

3 ♂ ♀ juv. Maprit, P. Siam, 3-9.1.16.

3 ♂ ♀ Klong Bang Lai, P. Siam, 20.1 to 1.2.16.

All the specimens in the above series are typical *cara*.

The young male is marked "♀", but there are already a few red feathers shewing in the upper plumage which shew its correct sex.

130. *ARACHNECHTHRA FLAMMAXILLARIS FLAMMAXILLARIS*.

Nectarinia flammaxillaris, Blyth, J.A.S.B. xiv, p. 557 (1845).

2 ♂ 2 ♀ Bangkok, 18.6 to 5.7.15.

2 ♂ Muak Lek, P. Siam, 23-25.7.15.

♂ Krabin, C. Siam, 4.10.15.

2 ♂ 2 ♀ Samkok, C. Siam, 30.8.15.

♂ ♀ Klong Wang Hip, P. Siam, 27.1.16.

♀ Bangkok, 7.3.16.

These are all quite typical *flammaxillaris*, and shew no approach to the Hainan race *rhizophoræ*, with its metallic blue forehead.

131. *ANTHOTHREPTES MALACCENSIS*.

Certhia malaccensis, Scop. Del. Flor. et Faun. Insubr. ii, p. 91 (1786).

♂ Bangkok, 18.6.15.

♂ Meklong, C. Siam, 27.6.15.

132. *ARACHNOTHERA AFFINIS MODESTA*.

Anthreptes modesta, Eyton, P.Z.S. p. 105 (1839).

2 ♂ Tung Song, 15-17.9.15.

133. *ARACHNOTHERA LONGIROSTRIS LONGIROSTRIS*.

Certhia longirostris, Lath. Ind. Orn. i, p. 299 (1790).

♀ Hup Bon, S. E. Siam, 23.7.15.

3♂ Tung Song, P. Siam, 17-27.9.15.

♀ Klong Wang Hip, P. Siam, 9.10.15.

2 ♂ Maprit, P. Siam, 31.12.15. to 6.1.16.

♀ Klong Bang Lai, P. Siam, 16.1.16.

Before examining the above series of skins, I had received eggs of this Spider-Hunter * from Mr. Herbert, which differed so extraordinarily from those laid by it in other parts that I fully expected to find it different in some respects. A most careful examination and comparison with other series from Burma, Assam and the Malay Peninsula do not enable me to detect any difference between them.

The eggs of the Siam bird are a peculiarly dead china white, with no trace whatsoever of the pink tinge always present to a greater or lesser degree in the eggs of the Spider-Hunter laid in all other parts of its habitat. The markings consist of tiny reddish specks in a very well defined ring round the larger end.

134. CHALCOPARIA SINGALENSIS SINGALENSIS.

Motacilla singalensis, Gmel. Sys. Nat. i, p. 964 (1788).

Chalcoparia singalensis koratensis, Kloss, Ibis, 1918, p. 218.

♀ ♂ Bangkok, 14.6.15. and 3.3.16.

3♂ 2♀ Hup Bon, S. E. Siam, 17-27.7.15.

♂ Pak Jong, E. Siam, 21.8.15.

2♂ 2♀ Klong Wang Hip, P. Siam, 29.9 to 4.10.15.

♂ 2♀ Maprit, P. Siam, 2-6.1.16.

♂ Klong Bang Lai, P. Siam, 19.1.16.

After an examination of a huge series of this species I am quite unable to recognise Kloss' new sub-species "*koratensis*". I have had a series of 25 Siamese birds for comparison with over 100 specimens from more northern countries, and I can detect no differences which are of sub-specific value, and not due to individual variation.

Kloss is perfectly correct in his description of the young male bird, and in pointing out that it differs from the adult female in having no rufous on the throat and fore neck.

135. DICEUM CRUENTATUM.

Certhia cruentata, Linn. Syst. Nat. i, p. 187 (1766).

♂ Meklong, C. Siam, 26.6.15.

* The female was shot from the nest at Klong Wang Hip, [E. G. H.]

3♂ Muak Lek, E. Siam, 23-25.8.15.

4♂ 2♀ Klong Wang Hip, P. Siam, 30.9 to 8.10.15.

♂ Krabin, C. Siam, 6.11.15.

♂ Bangkok, 17.12.15.

2 ♂ ♀ Maprit, 29.12.15 and 3.1.16.

I find it impossible to divide this species into geographical races, though at first I was disposed to separate the Chinese birds on account of the comparative greyiness of the cheeks and the sides of the neck, a feature which seems to be very fairly consistent. The Siamese birds also, at first sight, seem to be a purer white below than those from Burma and Bengal, but this is probably due to the great care with which all Robinson's and Kloss' collectors (one was employed by Mr. Herbert) make up their skins. For the present I leave all these Crimson-backed Flower-Peckers under the one name.

136. *DICAËUM CHRYSORRHOËUM*.

Dicaeum chrysorrhoeum, Temm, Pl. Col pl. 478, fig. i. (1829).

4 ♂ ♀ Muak Lek, E. Siam, 23-25.8.15.

2♂ Krabin, C. Siam, 6-7.11.15.

Birds from Sikkim to the Malay Peninsula do not seem to vary at all, either in colouration or size, but there are two specimens in the British Museum from Mt. Dulit and Kina Balu in Borneo, which probably deserve to be separated on account of their much darker plumage, and the unusually heavy dark stripes on the lower plumage.

137. *PIPRISOMA SQUALIDUM MODESTUM*.

Prionochilus modestus, Hume, Str. Feath. iii, p. 298 (1875).

2♂ 2♀ Pak Jong, E. Siam, 19-21.8.15.

4 ♂ ♀ Krabin, C. Siam, 30.10 to 7.11.15.

This form of *Piprisoma* ranges to the north as far as Cachar and the Assam Hills south of the Brahmapootra. In the hills north of this river typical *squalidum* alone is found.

138. *PRIONOCHILUS IGNICAPILLUS*.

Dicaeum ignicapilla, Eyton, P.Z.S. p. 105 (1839).

♂ juv. Tung Song, P. Siam, 11.9.15.

139. PRIONOCHILUS MACULATUS.

Pardalotus maculatus, Temm. Pl. Col. iii, pl. 600, f. 3 (1836).

♂ et ♂ juv. Klong Wang Hip, P. Siam, 8-9.10.15.

The adult male has a very white throat, and is somewhat less yellow on the under parts than usual, whilst the upper parts appear to be exceptionally dark.

140. PITTA CÆRULEA CÆRULEA.

Myiothera caerulea, Raffl. Trans. Linn. Soc. xiii, p. 301 (1822).

3 ♂ Maprit, P. Siam, 5-9.1.16.

These three birds from Siam agree well with those from the type locality, Sumatra. They are all males, so that at present one cannot say whether the females are different.

The female of the Bornean bird is quite different to that of the Sumatran and to those obtained in the Malay Peninsula. The colour of the head is a much richer, brighter brown, and the black consists of tiny black edges instead of black bars to the feathers.

This form I have recently (Bull. B. O. C. 1918, No. cexxxvii p. 20) named *Pitta caerulea hosei* after Dr. Charles Hose, by whom the specimens were collected.

141. PITTA CYANEA.

Pitta cyanea, Blyth, J. A. S. B. xii, p. 1008 (1843).

♂ Klong Song, near Petriu, C. Siam, 25.2.16.

I cannot see any difference in this species throughout its range from Assam to Malaya.

142. PITTA CYANOPTERA.

Pitta cyanoptera, Temm. Pl. Col. pl. 218 (1823).

2 ♂ ♀ Hup Bon, S. E. Siam, 22.7.15.

These specimens call for no remark.

143. PITTA CUCULLATA.

Pitta cucullata, Hartl. Rev. Zool. 1843, p. 65.

2 ♂ ♀ Hup Bon, S. E. Siam, 18-27.7.15.

144. PITTA GURNEYI.

Pitta gurneyi, Humé, Str. Feath. iii, p. 296, pl. iii, (1875).

♂ ♀ Klong Wang Hip, P. Siam, 1-9.10.15.

3 ♂ ♀ Maprit, P. Siam, 5.1.16.

♂ ♀ Klong Bang Lai, P. Siam, 17-21.1.16.

145. PITTA BOSCHI.

Pitta boschi, Muller and Schl. Vert. Zool. Pitta, p. 5.

2 ♂ 4 ♀, ♂ juv. ♀ juv. Tung Song, P. Siam, 12-19.9.15.

juv. o, Klong Wang Hip, P. Siam, 5.10.15.

The plumages of the young birds which are in various stages are very interesting. In the earliest stage represented the plumage is dull brown everywhere except on the throat, which is white. The feathers of the head, neck, upper back, breast and flanks have pale fulvous central stripes. The darker cheeks and ear-coverts are already distinguishable, and the quills are brown without any indication of the white band.

In a somewhat older bird the breast feathers are fulvous with fine black margins only, the crown and forehead are nearly black with broad pale striæ; the nape is a golden fulvous or buff: the upper back brown with pale centres to the feathers, and the lower back and wing-coverts brown with each feather edged darker. The quills are the same as in the adult bird.

From this stage the bird apparently moults into the full male and female adult plumage.

146. EURYLÆMUS JAVANICUS.

Eurylaimus javanicus, Horsf. Trans. Linn. Soc. xiii, p. 170 (1821).

♀ Hup Bon, S. E. Siam, 16.7.15.

2 ♂ Chan Teuk, E. Siam, 10.8.15.

The female from Hup Bon is in juvenile plumage. The two males both have the abdomen and vent a very chestnut red rather than vinaceous red as it is on the breast. This may be due to the fact that these two specimens have not yet acquired their full colouration.

147. EURYLÆMUS OCHROMELAS.

Eurylaimus ochromelas, Raff. Trans. Linn. Soc. xiii, p. 297 (1822).

♂ ♀ ♂ semi-adult. Tung Song, P. Siam, 10.9.15.

The young male is in plumage similar to that of the adult

male, but already shews signs of acquiring the black pectoral band.

148. CORYDON SUMATRANUS.

Coracias sumatranus, Raff. Trans. Linn. Soc. xiii, p. 303 (1822).

♂ ♀ Hup Bon, S. E. Siam, 25.7.15.

149. CYMBORHYNCHUS MACRORHYNCHUS MALACCENSIS.

Cymborhynchus malaccensis, Salvad. Att. R. Ac. Sc. ix, p. 425 (1874).

♂ Chan Teuk, E. Siam, 13.8.15.

3 ♂ ♀ Klong Wang Hip, P. Siam, 5-8.10.15.

2 ♂ Klong Bang Lai, P. Siam, 26.1.16.

Whilst comparing this series with others from the Peninsula and from Borneo and Sumatra, I also compared birds from the two latter islands with one another, and in the result am unable to distinguish between them. As a rule the Sumatran birds have a little more white on the tail feathers, but this distinction does not always hold good. In size the two birds are the same, Sumatran birds having the wings between 95 and 102 mm., and Bornean between 95 and 101 mm.

150. SERILOPHUS LUNATUS LUNATUS.

Serilophus lunatus, Swainson, Class B, ii, p. 263.

♀ Hup Bon, S. E. Siam, 27.7.15.

♂ 2 ♀ Tung Song, P. Siam, 16-20.9.15.

2 ♂ Klong Bang Lai, P. Siam, 19-29.1.16.

In this series the variation in the pretty white tipping to the feathers on the side of the neck of the female varies very greatly in extent: in one it is more strongly developed than in the majority of *S. l. rubropygius*, in a second it is much the same as in normal birds of that race, but in the third it is obsolete.

151. CALYPTOMENA VIRIDIS.

Calyptomena viridis, Raff. Trans. Linn. Soc. xiii, p. 295. (1822)

♂ o Tung Song, P. Siam, 21-22.10.15.

252. PICUS CANUS HESSEI.

Gecinus occipitalis hessei, Gyldenstolpe, Orn. Monatsb. xxiv, p. 28 (1916).

♂ Krabin, C. Siam, 12.11.15.

In the Ibis 1919, p. 184 I have shewn that I agree with Gyldenstolpe in differentiating between the Siamese birds and those from northern India, whether these latter are the large green birds from extreme north-western Himalayas or the smaller bronzed birds from Sikkim and Assam. I cannot, however, distinguish in any way between the birds from Siam and those of practically the whole of Burma. Accordingly, as there is no name which is applicable to the Burmese form, this, together with birds from Siam, must bear his name *hessei*.

153. PICUS VITTATUS VITTATUS.

Picus vittatus, Vieill. Nouv. Dict. d'Hist. Nat. xxvi, p. 91 (1818).
Gecinus vittatus eisenhoferi, Gyldenstolpe, Orn. Monatsb. xxiv, p. 28 (1916).

♂ 2 ♀ Bangkok,

♂ Hup-Bon, S. E. Siam,

♀ Pak Jong, E. Siam,

I am rather doubtful as to whether Gyldenstolpe's *eisenhoferi* can be maintained. Kloss (Ibis, 1918 p. 104) gives some interesting measurements shewing how this species decreases in size the further it extends to the south, but says that he can find no differences in colour between the northern and southern specimens. With this latter opinion I fully agree, and moreover, after an examination of the excellent material in the British Museum, it does not appear that the diminution in size southwards is nearly so pronounced in this particular species as Kloss' figures would make out.

The following are the measurements of 34 birds, excluding Mr. Herbert's:—

Java	12 birds, wing,	123-137 mm. average,	130 mm.
Malay States	9 " "	123-132 mm. "	127.6 mm.
Cochin China	5 " "	128-136 mm. "	132 mm.
Siam	8 " "	128-143 mm. "	137.2 mm.

Mr. Herbert's birds measure;—

Pak Jong,	E. Siam, wing,	149 mm. }	
Bangkok,	C. " "	136 mm. }	
"	" " "	137 mm. }	average, 141 mm.
"	" " "	140 mm. }	
Hup Bon, S. E.	" " "	144 mm. }	

Perhaps even more material is necessary before we can decide the status of *eisenhoferi*, and if accepted, how far south its area should be held to extend.*

For the present I retain all the Siamese birds under the name *vittatus*.

154. *PICUS VITTATUS VIRIDANUS*.

Picus viridanus, Blyth, J.A.S B. xii, p. 1000 (1843).

2 ♀ Maprit, C. Siam, 30.12.15. and 10.1.16,

These are apparently the first specimens of true *viridanus* received from Siam in the British Museum, for I find that all those which have been labelled *viridanus* are nothing but *vittatus*.

Herbert's birds are very fine specimens, the barring on the under-parts coming right up to the upper breast in stronger, better defined bars than in any of the Burmese skins in that collection. The wings of the two birds measure respectively 135 and 139 mm.

As an examination of the material in the British Museum and elsewhere does not enable me to maintain Gyldenstolpe's sub-species *eisinhoferi*, there appear to me to be only two sub-species, viz., *G. v. viridanus*, which is found throughout Burma, Chin Hills, Kachin Hills, south Shan States, north and central Siam, and possibly extreme west of Peninsular Siam and Burma.

G. v. vittatus, which is found from Java, Malay States, east and west Peninsular Siam and Burma, in South-Eastern Siam and as far north as Pak Jong in eastern Siam, and thence again, if Gyldenstolpe is correct, in assigning his birds to the *vittatus*, rather than the *viridanus* group, well up into north central Siam and Cochin China.

In a letter to me Mr. Herbert remarks on the fact not, I think, hitherto recorded, of the great part taken in incubation by the male birds of most species of Wood-pecker.

* The following are the wing measurements of 14 birds in Mr. Williamson's collection :—

4 birds from	E. Siam,	wing average	142 mm.
3 " "	C. " "	" "	134 mm.
3 " "	S. E. " "	" "	141 mm.
4 " "	S. W. " "	" "	135 mm.
Average wing measurement of 14 birds=			138 mm. [Eds.]

"As regards *vittatus* and its eggs, the male was taken on the nest with the clutch. There were also some clutches of eggs taken of the little Pied Wood-pecker, and in several instances the male bird was caught on the eggs or shot as he left the nest-hole. I think I have also known two similar instances with *Tiga javanensis*."

I may remark that I have observed the same habit with both the genera *Chrysocolaptes* and *Chrysophlegma*. Of these the male undoubtedly does the major share of the incubation, at all events, by day. By night I think with many Wood-peckers, both parents sleep within the nest-hole, but it is of course difficult to make really accurate observations after dark.

As regards *Micropternus*, male and female are too much alike to make it possible to discern which leaves the nest-hole unless the bird is actually shot, and as they nearly all lay their eggs in tree-ants' nests, it is never possible to catch them on the nest itself.

155. BLYTHIPICUS PORPHYROMELAS.

Venilia porphyromelas, Boie. Briefe. Geschr. aus Ostend. p 143 (1832).

♀ Klong Bang Lai, P. Siam, 29.1.16.

The generic name *Venilia* is preoccupied in both Lepidoptera and Mollusca, and the next oldest name appears to be *Blythipicus* of Bonaparte (1850), and however ridiculous some ornithologists may consider such hybrid names to be, this is no reason for discarding them.

This specimen is quite typical, and calls for no remark.

156. MIGLYPTES TRISTIS GRAMMITHORAX.

Phaiopicus grammithorax. Malh. Picidae, ii, p. 12, pl. xlviii, fig. 6 (1862).

♀ Tung Song, P. Siam, 26.9.15.

♀ Klong Wang Hip, P. Siam, 29.9.15.

♂ Klong Bang Lai, P. Siam, 26.1.16.

Two of the above three specimens are noticeable for the absence of all tinge of rufous in the pale markings of the

plumage; the lores, forehead and chin are almost yellow when compared with the rufous of most specimens. The third specimen is normal in this respect.

157. MIGLYPTES JUGULAREIS.

Picus jugularis, Blyth, J.A.S.B. xiv., p. 195 (1845).

2 ♂ Hup Bon, S. E. Siam, 21-25.7.15.

♂ ♀ Pak Jong, E. Siam, 29-30.11.15.

One of the males which is acquiring the black plumage above has the breast suffused with sage-green as in the nestling stage.

158. CHRYSOPHLEGMA FLAVINUCHA PIERREI.

Chrysophlegma pierrei, Oustalet, Le Naturaliste, 1889, pp. 44, 45.

♀ Chan Teuk, E. Siam, 11.8.15.

♂ Pak Jong, E. Siam, 1.12.15.

These two birds are both good examples of the rare *C. f. pierrei*. The male has a wing of 152 mm., and the female 148 mm., whilst the type of *pierrei*, which is a female, has a wing of 156 mm. They also have the decidedly pale upper and lower plumage of *pierrei* contrasting well with typical *wrayi* in this respect.

Kloss' *C. f. lylei* (Ibis 1918, p. 110.) is assuredly nothing but *pierrei*, the small differences mentioned by him as shewn in his specimen not being discernible in either of Mr. Herbert's birds.

The two birds described by Gyldenstolpe under the name of *flavinucha* are probably, judging by the wing measurements, (♂ 156, ♀ 159 mm.), this race also, as true *flavinucha* would seem to have wings measuring from 162 to 180 mm.

159. CHRYSOPHLEGMA HUMII.

Chrysophlegma humii, Hargitt, Ibis 1889, p. 231.

♂ ♀ Tung Song, P. Siam.

The two specimens in Mr. Herbert's collection are quite typical *humii*.

160. CALLOLOPHUS MINEATUS MALACCENSIS.

Picus malaccensis, Lath. Ind. Orn. i, p. 241, (1790).

Callolophus mineatus perlutus, Kloss, Ibis, 1918 p. 110.

♂ Klong Bang Lai, P. Siam, 23.1.16.

This bird agrees perfectly with typical *malaccensis*, which varies greatly in size in the same locality.

Kloss' *C. m. perlatus* appears to me to be nothing more than *malaccensis*. It is described, as is *C. f. lylei*, from a single specimen.

161. DENDROCOPUS PECTORALIS PECTORALIS.

Picus pectoralis, Blyth J. A. S. B. xv, p. 15 (1846).

2 ♂ ♀ Bangkok, 5. 7. and 17.12.15.

These specimens are quite normal, and call for no remark.

162. CHRYSOCOLAPTES GUTTACRISTATUS DELESSERTI.

Indopicus delesserti, Malh. N. Class. Mem. Acad. Metz (1848) p. 343.

♂ Krabin, C. Siam, 2.11.15.

♂ Maprit, P. Siam, 2.1.16.

♂ Klong Bang Lai, P. Siam 30.1.16.

Elsewhere, (Ibis 1919 p. 197), I have shewn that I cannot divide the birds of Southern India from those of Peninsular Burma and Siam, so they all must bear Malherbe's name of *delesserti*. The other subspecies which seem to me to be good are *C. g. gutta-cristatus* from Bengal, North and South Assam and Burma, and *C. g. sultaneus* from North-West India and Nepal. It is one of the many cases of parallel evolution of sub-species of northern birds as they descend south in India and Burma, carried out in this instance to an unusually similar result.

163. MICROPTERNUS BRACHYURUS WILLIAMSONI.

Kloss, Ibis 1918 p. 197.

♀ Meklong, C. Siam, 28.6.15.

♂ Samkok, C. Siam, 31.8.15.

♂ Bangkok, 6.3.16.

The Samkok bird may be wrongly sexed, as it shews no trace of the red moustache, although it appears to be fully adult. The wings of the three birds measure respectively ♀ 123 mm., ♂ ♂ 120 and 122 mm.

Kloss has recently described this new sub-species from a single specimen collected at Koh Lak, S. W. Siam. Unfortunately

the differences which he quotes as distinguishing it from its nearest allies are all more or less individual rather than sub-specific in character except, perhaps, the "narrower dark bars on the wings and back" (? lower back).

Mr. Herbert's three specimens and two others from Siam in the British Museum collection all agree with one another in one feature—rarely found in birds from elsewhere—the non-existence of any barring on the scapulars and upper back. They average also rather light in the tint of their plumage generally. In two of Mr. Herbert's birds there is no barring on the under plumage also, whilst in the third the bars are confined to the flanks only. Of the two Museum specimens one is immaculate below, the other more than usually profusely barred.

All five birds have the centres of the throat feathers concolorous with the breast; all have red shafts to the wing quills, but in two the bases of the shafts are marked with blackish.

If it is eventually found that the Siamese *Micropterni* all have immaculate backs the name will have to be confined to this race; otherwise, the name will still hold good for birds from Siam and Burma. There is at present no name for the race north of Bangkok, (vide, Baker, Ibis 1919 p. 202) should this be separated.

164. MICROPTERNUS BRACHYURUS BRACHYURUS.

Picus brachyurus, Vieill. Nouv. Dict. d'Hist. Nat. xxvi, p. 103 (1818).

♀ Klong Wang Hip, P. Siam, 4.10.15.

2 ♂ Krabin, C. Siam, 2-14.11.15.

All three of these birds are very typical *brachyurus* with dark throats, very black shafts to the wing quills, and densely barred lower plumage. They are, however, larger than most south Malayan birds, the wings being 117, 127 and 123 mm. respectively.

165. TIGA JAVANENSIS INTERMEDIA.

Picus intermedius, Blyth J. A. S. B. xiv, p. 193 (1845).

2 ♂ ♀ Samkok, C. Siam, 21-22. 6. 15.

♀ Hup Bon, S. E. Siam, 21. 7. 15.

♀ Pak Jong, E. Siam, 19. 8. 15.

2 ♂ ♀ Krabin, C. Siam 3-7. 11. 15.

I have already dealt with this species and its geographical races at some length in the Ibis 1919, p. 205, and it is therefore unnecessary for me to go into further detail here. All the specimens collected by Mr. Herbert agree well with Blyth's *intermedius*, which only differs in being smaller. The average wing measurement for 159 specimens of *intermedia* is 144.4 mm., whilst Mr. Herbert's birds have wings ranging from 135 to 149 mm., and averaging 143 mm., the two smallest birds coming from Samkok.

The average wing measurement for *T. j. javanensis* is under 130 mm.

166. GAUROPICOIDES RAFFLESI PENINSULARIS.

Hesse, Orn. Monatsb. xix, p. 192 (1911).

♂ Tung Song, P. Siam, 25. 10. 15.

This specimen does not agree with the rather doubtful form described by Hesse under this name. It is said to differ from typical *G. rafflesi* from Sumatra, in having red upon the upper tail-coverts and also in being much bigger.

In size the two forms do differ to some extent, nine Sumatran birds having a wing averaging 138 mm., whilst thirty-nine Peninsular birds have the same 134 mm. Mr. Herbert's specimen has a wing of 150 mm., but no red upon the upper tail-coverts.

This latter characteristic seems to be a very uncertain one. Of the series in the British Museum, some ten adult birds have no tinge of red, whilst the other ten have it to a greater or less extent. On the other hand, one so-called Sumatran skin has this red tinge quite apparent.

More skins from Sumatra are badly wanted, for of those in the Museum the majority have only got dealers' data tickets, and only one has an original collector's ticket. Two specimens, moreover, look suspiciously like Malaccan dealers' skins, and one cannot lay down any sound diagnosis on material of this nature.

167. HEMILOPHUS PULVERULENTULUS HARTERTI.

Muleripicus pulverulentulus harterti, Hesse, Orn. Monatsb. p. 182 (1911).

♂ Hup Bon, S. E. Siam, 27.7.15.

♀ Klong Wang Hip, P. Siam, 5.10.15.

♀ Hinlap, E Siam, 9.12.15.

♀ Klong Bang Lai, P. Siam, 13.1.16.

Hesse's sub-species is a quite good one, and birds from Assam and Burma are easily distinguishable by their much lighter colour than birds from Java, Sumatra, Borneo and Palawan, etc. From the extreme south of the Malay Peninsula birds are somewhat intermediate, one from Singapore and another from Johore being almost as black as any Java bird. Most specimens from the south of the Peninsula are nearer the northern forms, and should, therefore, be kept with them. As usual, the southern birds average a trifle smaller than the northern, but are not sufficiently so to constitute a third sub-species.

Birds from Assam, average wing 238 mm., and bill 49.5 mm.; Javan birds measure only wing 223 mm., bill 48.0 mm. These form the two extremes in size, but even in these two areas they have not much significance, as we have one specimen in the British Museum collection from northern Burma with a wing of only 218 mm., whilst another from Borneo has a wing of no less than 241 mm.

168. SASIA ABNORMIS ABNORMIS.

Picumnus abnormis, Temm. Pl. Col. iv, pl. 371, fig. 3 (1825).

2 ♂ Tung Song, P. Siam, 11-23.9.15.

2 ♂ Klong Wang Hip, P. Siam, 9-10.10.15.

♀ Maprit, P. Siam, 10.1.16.

All this series belong to this form of Piculet. Judging from their distribution, the birds with white eye-brows, *Sasia ochracea* (and sub-species) and those without any white round the eye, *Sasia abnormis*, form two good species. Both birds inhabit the same portions of the northern Malay Peninsula and Siam, and cannot therefore be sub-species of one species.

169. THEREICERYX LINEATUS INTERMEDIUS.

Stuart Baker, Bull. B. O. C. 1918, p. 19.

♂ Chan Teuk, E. Siam, 9.8.15.

♂ Pak Jong, E. Siam, 16.8.15.

♂ Krabin, C. Siam, 2.11.15.

The birds of central and south Burma and of south Siam seem to be intermediate in size between those of Java—*T. l. lineatus*—and those of northern India—*T. l. hodgsoni*—and as they cover a far longer range than either of these two extreme races, they should bear a name as a geographical race.

The typical birds from Java and Bali are very small, thirteen birds having an average wing measurement of about 117 mm. These are found only in the two Islands named.

Birds from the northern area are very large, averaging nearly 131 mm. in wing length. These are found over the whole of Northern India, Chin and Kachin Hills, Shan States and Siam, though exactly where the Siamese birds meet the next race cannot be determined on the material available. This northern race bears Hodgson's name, and it is possible that yet another race in N. W. India should be separated, as it is again much larger with a wing of over 137 mm.

T. l. intermedius, as its name denotes, is half-way between the two extremes, and 71 birds have an average length of wing of 124 mm.

170. THEREICERYX FAIOSTRICTA FAIOSTRICTA.

Bucco faiostrictus, Temm. Pl. Col. iii, pl. 227 (1831).

Thereiceryx flavostrictus praetermissus, Kloss, Ibis, 1918 p. 101.

♂ ♀ Hup Bon, S. E. Siam, 21.7.15.

Kloss has recently named some Barbets obtained by Neumann in south China under the name quoted above on the grounds of difference in size, but this reason does not seem to be sufficient.

There are no Chinese birds in the British Museum, but there are 8 of Neumann's in Tring, and these differ from other birds *in having no red patch on the side of the throat*, a character which will suffice to maintain Kloss' name.

The size of the Chinese birds, as stated by Kloss, is, "wing measurements 112 to 118 mm." Count Gyldenstolpe has a fine series of 13 birds, and these measured *on the curved wing* are between

110 and 115 mm., practically exactly the same as Neumann's; Robinson records his four birds as over 112 mm., and all others, except the type of *saigonensis* vary between 108 and 112 mm.

This type is apparently an abnormally small bird of only 102 mm., and until it is proved that it is not only the type, but that it is really typical of a very small South-Eastern race, *saigonensis* must rank as a synonym of *faiostricta*.

171. CHOTORHEA MYSTOCOPHANES.

Bucco mystocophanes, Temm. Pl. Col. iii, pl. 315 (1824).

♂ Tung Song, P. Siam, 20.9.15.

This is an extension of the hitherto recorded habitat of this little Barbet, but I can see no difference between this specimen and a series from the Malay Peninsula.

On the other hand when a series from the latter locality is compared with a series from Borneo the females of the Malay Peninsula seem to have a much yellower throat and chin. In the Bornean birds the blue often runs up practically to the angle of the bill, and in nearly every case the throat is more or less suffused with this colour. In the Malay Peninsula birds and in those from South Tenasserim the chins and throats are yellowish with no tinge of blue at all.

I cannot separate Oberholser's sub-species *C. m. ampala* from Tana Balu. All Oberholser says is that it is larger with a bigger red patch, but he gives no measurements for comparison.

172. CHOTORHEA CHRYSOPOGON CHRYSOPOGON.

Bucco chrysopogon, Temm. Pl. Col. iii, pl. 315 (1824).

2 ♂ ♀ Tung Song, P. Siam, 14-20.9.15.

The lower surface in these specimens is very green, and less yellow than in any of the big series in the British Museum from any other locality, but they are also better made, fresher skins in perfect condition, and this may account for the difference.

The wings measure between 131 and 134 mm.

173. CYANOPS ASIATICA? INCOGNITA.

Megalaima incognita, Hume, Str. Feath. ii, pp. 442, 472, 486 (1874).

♂ ♀ Tung Song, P. Siam, 24.9.15.

This is a rare and little known bird in collections, and it is with some doubt that I apply the name to Mr. Herbert's specimens.

Incognita differs from *C. a. davisoni* principally in having the scarlet patch confined to a spot in the middle of the nape, and not extended across it. It also differs in having the chin and throat a very pale washed-out blue instead of an intense azure blue as in *asiatica*.

Mr. Herbert's two birds do not agree well with *incognita*, as they have broad red foreheads, and no black moustachied streak and no yellow feathers round the eye, whilst the head above is more blue. Both specimens are young birds, and in the absence of more adult material, I forbear to name them, but it will be interesting to obtain a further series, and see if these differences are confirmed.

The feathers on the side of the crown in the older bird are moulting, and the new feathers are also blue, shewing that there will be no change into the broad red coronal band of *asiatica*.

174. CYANOPS DUVAUCELI CYANOTIS.

Bucco cyanotis, Blyth, J. A. S. B. xvi, p. 465 (1847).

Mesobucco duvauceli orientalis, Robinson, Ibis, p. 738 (1915).

♂ ♀ Hup Bon, S. E. Siam, 23-27.7.15.

2 ♂ 2 ♀ Hinlap, E. Siam, 6-8.12.15.

The 6 birds,—possibly prepared by the same skinner—are, even to the most minute details, exactly the same as those from Ok-Yam, upon which Mr. Robinson has founded his new sub-species. Mr. Herbert's birds are quite typical *cyanotis* and are replicas of many others from Sikkim, Cachar, and Northern Burma. They are, however, beautiful skins, and shew up as very clean bright specimens when placed amongst a large number of dirtier, less well-made skins; on the other hand, they are in no way different from specimens which are equally nicely prepared. Mr. Robinson separates his new sub-species on the ground that it is bigger than *cyanotis* with a wing of 83 and 84 mm.; but *cyanotis*, from all over the area it inhabits, runs up to 86 and even 87 mm. As regards the yellow intermixture in the red below the eye, this obtains also in many

individuals over an equally wide area, though, often, the feathers below the eye are injured or lost in the preparation of the skin.

175. *CALORAMPHUS FULIGINOSA* HAYL.

Bucco hayi, J. E. Gray, Zool. Misc. p. 33 (1831).

♂ Tung Song, P. Siam, 24.9.15.

176. *XANTHOLEMA HEMATOCEPHALA* INDICA.

Bucco indicus, Lath. Ind. Orn. i, p. 205 (1790). India.

2 ♂ 2 ♀ Sansep, Bangkok, 3-4.7.15.

2 ♀ Klong Wang Hip, P. Siam, 3-6.10.15.

5 ♀ Krabin, C. Siam, 30-31.10.15.

♂ Samray, Bangkok, 6.3.16.

The type locality for *Bucco hæmatocephalus* Muller, is the Philippines, and this bird has a much bigger bill than that from other localities, including Siam, which must bear Latham's name of *indicus*. Employing Kloss' excellent method of measuring, i. e., from the point of the nostrils to the tip of the bill, I find that in no case does the bill exceed 15 mm., and it varies from 13 to 15 mm. In the Philippine birds it is never less than 16, and runs up to 18 mm. In size the bird itself is much the same as those from elsewhere, having a wing of 82 mm. exactly.

In colour the Philippine bird is generally darker, a more bluish green, especially on the primaries.

177. *CORACIAS AFFINIS*.

Coracias affinis. McClelland, P. Z. S. p. 164 (1839).

♀ Samkok, C. Siam, 21.6.15.

♂ ♀ Krabin, C. Siam 3-15.11.15.

The question as to whether *Coracias affinis* and *Coracias indicus* are races of the same species is very doubtful. That they are representative species is of course true, and some naturalists would consider this sufficient reason to call them sub-species. As a rule, however, geographical races, except island forms, grade into one another gradually, where the two forms meet. With these birds such is not the case, for at the principal meeting-place, Eastern Nepal, Sikkim and Bhutan most specimens are easily referable to

one or the other, some are halfway between the two, whilst others are more one than the other. Certainly, if we judge from the birds obtained in these districts, we should say that they were the result of hybridization rather than specimens of two forms intergrading.

On the other hand, one finds individuals of each form in the area inhabited by the other; as for instance in Calcutta, specimens of *C. affinis* occur, and again in Cachar and Sylhet I have seen almost equally typical specimens of *C. orientalis*.

For the present I leave this Roller under a bi-nomial.

178. EURYSTOMUS ORIENTALIS CALONYX.

Eurystomus calonyx, Sharpe, P. Z. S. 1890, p. 551, Nepal.

♂ Pak Jong, E. Siam, 18.8.15.

♀ Muak Lek, E. Siam, 25.8.15.

♀ Klong Wang Hip, P. Siam, 30.9.15.

The three specimens obtained by Mr. Herbert in Siam, agree well with others in the British Museum from the same country. They are not very typical *calonyx*, but are nearer this form than *orientalis*. The secondaries and greater wing-coverts have a fair amount of blue on them, but the tails have very little. The differences between *E. o. calonyx* and *E. o. orientalis* are not very great, how slight they are is best realised when we find Sharpe often naming two birds from the same place, the one by one name and the other by the second name.

179. MEROPS SUPERCILIOSUS PHILIPPINUS.

Merops philippinus, Linn. Syst. Nat. 13th Ed. 1, p. 183 (1787).

Type locality, Philippine Islands.

♂ Samkok, C. Siam, 21.6.15.

♀ Paknam, C. Siam, 14.2.16.

180. MELITTOPHAGUS ERYTHROCEPHALUS ERYTHROCEPHALUS.

Merops erythrocephalus, Gmelin, Syst. Nat. 1, p. 463 (1778). India.

♂ Klong Wang Hip, P. Siam, 2.10.15.

Gmelin's description seems to be quite satisfactory, and there is no reason why his name should not be used. The original description of *Apiaster indicus erythrocephalus* as given in Brisson (Av. 4, p. 563 n. 13, p. 44, f. 3A) is also equally so.

181. NYCTIORNIS AMICTUS.

Merops amictus, Temm. Pl. Col. iv, pl. 310 (1824).

♂ Tung Song, P. Siam, 12.9.15.

♂ Klong Wang Hip, P. Siam, 4.10.15.

182. CERYLE RUDIS LEUCOMELANURA.

Ceryle leucomelanura, Reichenbach, Hand-L. Alced. p. 21, Taf. 409
B. fig. 3488. (Deer. 1851).

♂ 2 ♀ Bangkok, 18-21.6.15.

♂ Samkok, C. Siam, 31.8.15.

183. ALCEDO ISPIDA BENGALENSIS.

Alcedo bengalensis, Gml. Syst. Nat. i, p. 450 (1788).

2 ♂ ♀ Krabin, C. Siam, 6-16.11.15.

♂ Paknam, C. Siam, 14.2.16.

♂ ♀ Samray, Bangkok, 6.3.16.

♂ Samkok, C. Siam, 16.3.16.

The wings of the males measure from 69 to 72 mm., and the females from 69 to 71.5 mm. They thus average a little small for this form, but possibly a larger series would prove to be of the normal standard. In colour they are quite typical *bengalensis*.

184. ALCEDO MENINTING SCINTILLANS.

Alcedo meninting scintillans, Stuart Baker, Bull. B. O. C. 1918,
No. cexxxviii, p. 38.

Type ♂ No. 87.8.20. 1698. Hume Coll. B. M.

Type locality, Bankasoon.

♀ Klong Wang Hip, P. Siam, 1.10.15.

Above this bird is a rather deeper, more purple-blue than *asiatica*, (the proper name for the Bengal and Indian bird generally called *beavani*), this being especially noticeable on the head. Scapulars black.

Wing 62-66 mm.; bill 32-35.5 mm. (19 specimens).

In North and Central Siam another form is found which I have recently named *A. m. coltarti*, and which extends from Assam and Sikkim through Burma north of the above form *scintillans* and in the Chin Hills, Shan States and Cochin China. It is similar to *asiatica*, but a good deal smaller, and when viewed as a series,

rather lighter, less black or blue, on the back. The spots on the wing-coverts are smaller, but lighter and more conspicuous. The wing varies from 62-69 mm. instead of 69-72 mm. as in *asiatica*.

185. HALCYON PILEATA.

Alcedo pileata, Bodd. Tabl. Pl. Enl. p. 41 (1783).

♂ Krabin, C. Siam, 31.10.15.

♂ Pak Jong, E. Siam, 4.12.15.

♂ Samray, Bangkok, 17.12.15.

2 ♂ 2 ♀ Samray, Bangkok, 7-11.3.16.

Mr. Herbert's fine series of this widely-spread Kingfisher calls for no remark. Over the whole of its range in China, Siam, Burma, India and the Malay Peninsula and the Islands, I can see no variation in size or plumage which necessitates its division into geographical races.

186. HALCYON SMYRNENSIS FUSCA.

Alcedo fusca, Bodd. Tabl. Pl. Enl. p. 54 (1783).

♂ Krabin, C. Siam, 15.11.15.

Calls for no remark.

187. CARCINEUTES PULCHELLUS AMABILIS.

Carcineutes amabilis, Hume, Str. Feath. i, p. 474 (1873).

Type locality, Pegu Hills.

♂ Hup Bon, S. E. Siam, 19.7.15.

♂ Muak Lek, E. Siam, 24.8.15.

♀ Tung Song, P. Siam, 17.9.15.

2 ♂ ♀ Hinlap, E. Siam, 7.12.15.

The difference between the males of *C. p. pulchellus* and *C. p. amabilis* is very slight, though, as Hume points out, the rufous collar in the latter is obsolete or very ill-defined. The females are, however, conspicuously different from one another, those from Tenasserim northwards and eastwards being much redder above than those from south of that province. The under-parts, also, are somewhat less boldly spotted.

The gradation in size from north to south is not very marked north and central Burmese birds run from 81 to 94 mm. in wing measurement, those from south Burma and Siam 80 to 90 mm., and those from the Malay Peninsula from 78 to 87 mm.

The Siamese birds vary between 87 and 91 mm.

188. SAUROPATIS CHLORIS CHLORIS.

Alcedo chloris, Bodd. Tabl. Pl. Enl. p. 49, Lath. Syn. B. i, p. 620 (1783).

Type locality, "Bouru, one of the Molucca Islands."

3 ♂ Bangkok, 4.6.15. and 6-7.3.16.

♂ Meklong, C. Siam, 20.6.15.

Robinson (Ibis 1911, p. 34) has already pointed out that *Sauropatis humei* and *Sauropatis armstrongi* are one and the same bird, and he adds that he doubts whether they are not identical with *S. chloris*. With Robinson's conclusions I am in complete accord, and after a most careful consideration of the mass of material in the British Museum—about 200 specimens—have no doubt that all three so-called races must be lumped together.

189. RAMPHALCYON CAPENSIS BURMANICA.

Pelargopsis burmanica, Sharpe, P. Z. S. 1870 p. 67 (Toung-hoo).

2 ♂ o Krabin, C. Siam, 29.10 and 4-10.11.15.

Sharpe's division of this Kingfisher into different species has led to the most curious confusion. He admitted two and even three subspecies from the same locality, and the consequent mixture of different species under the same name, and splitting up of other species under various names, has rendered the magnificent series in the British Museum very difficult to work. The result of my recent examination has been given in *Novitates Zoologicae*, 1919, and therein it is shewn that the Siamese birds are all of this race, which is widely extended over the whole of Burma, Siam and Cochin China.

The wings of Mr. Herbert's birds vary from 143 to 154 mm., and the bills from 67 to 72 mm.

190. DICHOCEROS BICORNIS.

Buceros bicornis, Linn. Syst. Nat. i, p. 153 (1766).

♀ Hup Bon, S. E. Siam, 20.7.15.

191. ANORRHINUS GALERITUS.

Buceros galeritus, Temm. Pl. Col. pl. 520 (1824).

♀ Tung Song, P. Siam, 15.9.15.

192. ANTHRACOCEROS ALBIROSTRIS ALBIROSTRIS.

Buceros albirostris, Shaw and Nodd. Nat. Misc. xix. p. 819 (1790).

2 ♂ ♀ Hup Bon, S. E. Siam, 17-24.7.15. (wing ♂ ♂ 270 and 276 mm., ♀ 244 mm.)

Gmelin's name *malabaricus* does not apply to this bird at all. His bird is named after the Calao de Malabar, Buffon, Hist. Nat. des Ois., and here a good plate is given which shews that *malabaricus* is the same as *coronatus*, the outer tail feathers proving this beyond all doubt.

Shaw and Nodder give both description and plate of *albirostris* from India, and it is probable that the proper name for the Burmese form is *leucogaster* of Blyth (J. A. S. B. x, p. 922, 1841) described from a bird sent by a Mr. Bark from Tenasserim with some other skins of birds and mammals.

193. UPUPA EOPS LONGIROSTRIS.

Upupa longirostris, Jerdon, B. of Ind. i, p. 383 (1864).

♂ ♀ Chan Teuk, E. Siam, 9-14.8.15.

♂ Krabin, C. Siam, 12.11.15.

All races of the Eastern Hoopoe, *i. e.*, of races east of Sikkim, are distinguished by being much larger than those to the west, and with having an even proportionately longer bill on an average, though abnormal birds are found everywhere with very long bills. Thus in Ceylon the average is only 47.5 mm. in a small series, but there is one bird with a bill of 57 mm. In Southern India a large series averages 48 mm. exactly, but there is one specimen which has a bill of 73 mm.

Assam birds are huge, and have wings averaging 146.1 mm. and bills of 54 mm., Burmese birds have these measurements respectively, 139.5 mm. and 54.5 mm., whilst Siam birds have wings of 142.5 mm. and bills just over 51 mm.

Under the circumstances I retain them under the name *longirostris*, the Assam birds forming a link with the still larger Tibetan form *saturata*.

194. CAPRIMULGUS MACRURUS BIMACULATUS.

Caprimulgus bimaculatus, Peale, U. S. Exped. En. vol. viii, p. 170 (1848).

♂ ♀ Klong Wang Hip, P. Siam, 8-9.10.15.

♂ ♀ Krabin, C. Siam, 1-5.11.15.

♀ Pak Jong, E. Siam, 2.12.15.

♂ ♀ Hinlap, E. Siam, 9.12.15.

Oberholser has shewn (Proc. U. S. Mus., v. 1e, p. 595, 1915) that the name *bimaculatus* precedes Hartert's *ambiguus* for this race of *macrurus*.

Mr. Herbert's Siamese birds are very large, three of the females measuring 200, 201 and 211 mm. respectively.

195. CAPRIMULGUS ASIATICUS.

Caprimulgus asiaticus, Lath. Ind. Orn. ii, p. 588 (1790).

♀ Bangkok, 6.6.15.

This specimen has a wing of 146 mm.

196. CAPRIMULGUS MONTICOLUS.

Caprimulgus monticolus, Franklin, P. Z. S. p. 116, 1831.

♂ Paknampho, 2.12.13. (Wing 192 mm.)

197. LYNCORNIS CERVINICEPS CERVINICEPS.

Lyncornis cerviniceps, Gould, Icon. Av. pt. ii, pl. 14 (1838).

♂ Muak Lek, E. Siam, 24.8.15. (Wing 308 mm.)

South Indian birds have been separated as *L. c. bourdilloni*. They average in wing measurement 279 mm. as against 301 mm. in 20 Burmese birds.

A Luzon bird with a wing of only 277 mm. also differs in being very richly coloured.

198. TACHORNIS BATTASIENSIS INFUMATUS.

Cypselus infumatus, Selater, P. Z. S. 1865, p. 602. (Borneo).

♂ Samkok, C. Siam, 17.3.16.

199. HARPACTES DUVAUCELLI.

Trogon duvaucellii, Temm. Pl. Col. pl. 291 (1824).

♂ Tung Song, P. Siam, 17.9.15.

200. HARPACTES ORESKIOS.

Harpactes oreskios, Temm. Pl. Col. pl. 181. (1823).

♂ Hup Bon, S. E. Siam, 21.7.15.

♂ Muak Lek, E. Siam, 23.8.15.

♀ Krabin, C. Siam, 17.11.15.

♂ ♀ Klong Bang Lai, P. Siam, 2.2.16.

The wings of Mr. Herbert's series range from 120 to 128 mm., the female being the largest.

201. PYROTROGAN DIARDI NEGLECTUS.

Pyrotrogan neglectus, Forbes and Robinson, Bull. Liver. Mus. ii, p. 34 (1899).

♂ Tung Song, P. Siam, 13.9.15.

This appears to be the first record of this grand Trogon from so far north as Siam.

202. HIEROCOCCYX SPARVEROIDES SPARVEROIDES.

Hierococcyx sparveroides, Vigors, P. Z. S. 1831, p. 173.

♂ Krabin, C. Siam, 6.11.15.

This is a most beautiful specimen, very pale and brightly coloured with the whole of the upper parts a pale slate-grey with no tinge of brown except to a slight extent on the wing quills. I have never seen a specimen similar to this, and it will be very interesting to ascertain if other Siamese birds attain a similar grey plumage. It is impossible to name a wandering bird such as this is from a single specimen, but more should be obtained.

203. HIEROCOCCYX FUGAX NANUS.

Hierococcyx nanus, Hume Str. Feath. v, p. 490 (1877).

♀ Maprit, P. Siam, 10.1.16.

Wing 145 mm. Apparently the first record of this Cuckoo from Siam.

204. CACOMANTIS MERULINUS MERULINUS.

Cuculus merulinus, Scop. Del. Flor. et Faun. Insubr. ii, p. 89 (1786).

♀ Samray, Bangkok, 16.12.15.

♂ Hua Takhae, C. Siam, 10.2.16.

Both birds are quite typical *merulinus*.

205. PENTHOCERYX SONNERATI SONNERATI.

Cuculus sonneratii, Lath. Ind. Orn. i, p. 215 (1790). India.

♀ Hup Bon, S. E. Siam. 25.7.15.

The Siamese birds appear to belong to the typical Burmese and Indian form. In the south of Peninsular Siam one would

expect to find the smaller race *P. s. senustus* which ranges from Borneo to Central Tenasserim. The wing in this race averages only 105.7 mm. as against over 122 mm. in typical *sonnerati*.

206. *CHRYSOCOCYX MACULATUS MACULATUS*.

Trogon maculatus, Gmelin, Syst. Nat. i, p. 404 (1788).

♀ Samray, Bangkok, 16.12.15.

This is a very pale bird with the sheen on the back plumage light and less green than usual. More material is required to enable one to work out the geographical races of this beautiful little Cuckoo, but two other Siamese birds in the British Museum collection agree fairly well with it.

207. *SURNICULUS LUGUBRIS*.

Cuculus lugubris, Horsf. Trans. Linn. Soc. xiii, p. 179 (1821). Java.

♀ Klong Wang Hip, P. Siam, 30.9.15.

♂ Krabin, C. Siam, 9.11.15.

♂ Pak Jong, E. Siam, 30.11.15.

This Cuckoo will require division into geographical races on two main grounds; comparative length of tail and wing formula. In the Indian and Malayan race the third primary is generally much longer than the fourth, and the first primary is comparatively large; in the Palawan birds the third and fourth primaries are practically equal, and the first primary is very small. Ceylon specimens have the fourth quill longest or subequal, and the first primary large.

Palawan birds also have very short tails, and Ceylon birds very long ones.

208. *EUDYNAMIS HONERATA MALAYANA*.

Eudynamis malayana, Cab. and Heine, Mus. Hein. iv, p. 52 (1862).

2 ♂ ♀ Krabin, C. Siam, 31.10 to 3.11.15.

The wing measurements of these birds are males 203 and 209 mm., and female 215 mm. The male shot on the 3rd has numerous white bars on the wings and tail.

209. *RHOPODYTES TRISTIS LONGICAUDATUS*.

Phaenicophaeus longicaudatus, Blyth, J. A. S. B. x, p. 923 (1841).
Moulmein.

♂ Samkok, C. Siam, 21.6.15

♂ ♀ Pak Jong, E. Siam, 18.8.15.

♂ ♀ Krabin, C. Siam, 1.11.15.

All five of these specimens must be placed under this sub-species. The stripes on the head and throat are well-developed, there is very little rufous wash on either breast or throat. The white spots on the tail are smaller than in the Sumatran bird, *R. tristis tristis*, and run across the tail at an angle instead of nearly straight.

There are five distinguishable races of this Cuckoo. (1) *R. t. tristis* from Sumatra, (2) *R. t. longicaudatus* from Burma, Siam and Malay Peninsula, (3) *R. t. montanus* from Northern India, Assam to Yunnan, (4) *R. t. hainanus* from Hainan, and (5) *R. t. borneensis* from Borneo.

210. PHENICOPHÆS ERYTHROGNATHUS.

Phenicophæus erythrognaethus, Hartl. Verz. Mus. Brem. p. 95 (1844).

♀ Tung Song, P. Siam, 15.9.15.

♂ Klong Wang Hip, P. Siam, 6.10.15.

The wing measurements of these two birds are 171 and 170 mm. respectively. This Cuckoo belongs to that extraordinary group of birds of which it is extremely difficult to say whether they form six genera, six species or merely six geographical races. In colouration they are all practically alike, but might be split up into two or three races on account of variation in depth of colour, etc. On the other hand, they are all structurally different in having nostrils of varying shape and placed quite differently in position on the bill. To me it appears to be one of those rare cases in which structural differences must be held to be of less importance than colour and pattern, and I retain all under the one generic head, and consider them to be species only. They cannot be reduced to sub-species, as there are not connecting links to join the one with another.

211. RHINORTHA CHLOROPHÆA CHLOROPHÆA.

Cuculus chlorophæus, Raffl. Trans. Linn. Soc. xiii, p. 288 (1822).
Sumatra.

♂ Tung Song, P. Siam, 24.9.15.

♀ Maprit, P. Siam, 4.1.16.

ERRATA.

Page 440, line 14. For PHÆNICOPHÆS read PHÆNICOPHÆS.

Do. line 15. For *Phœnicophæs* read *Phœnicophaës*.

Siam birds agree with typical *chlorophæa* from Sumatra. I am not able to distinguish between specimens from Sumatra, Malay Peninsula and Tenasserim. The Bornean birds are distinguishable by the females having the under parts much more rufous. The males hardly differ from those from Sumatra, though they are possibly more richly and brightly coloured on the whole.

212. *CARPOCOCYX RENAULDI*.

Carpococcyx renauldi, Oust. Bull. Mus. Paris, p. 314 (1896).

♂ ♀ Pak Jong, E. Siam, 19.8.15.

This magnificent Cuckoo has hitherto been known only by the single specimen, in the Paris Museum, which was very kindly lent to me for comparison with the above birds.

Oustalet's single bird was obtained in Annam, so that Siam forms a great extension of its habitat. Both specimens are in heavy moult, but have perfect wings and tails, though the latter are not in full moult.

The measurements are as follows:—

Wings, 284 and 272 mm.; tails, 330 and 325 mm.; bill from base of forehead to tip, 49 and 48 mm.; tarsi, 98 and 93 mm.; the male is the bigger bird, and the tails are in full moult.

Bill deep coral red, paler at base and on gonyes; legs deep coral red, toes and soles paler.

Forehead grey; whole head, neck, upper back and breast black; back, scapulars and lesser wing coverts grey, palest next the black neck and finely vermiculated with dark grey; quills black with a purple sheen; innermost secondaries green-grey, gradually changing to the grey of the coverts; rump strongly tinged with green, upper tail coverts deep green-blue, tail purple-blue; lower parts creamy white, finely vermiculated with bars of grey on flanks and thigh coverts.

213. *CENTROPUS SINENSIS INTERMEDIUS*.

Centrococcyx intermedius, Hume, Str. Feath. i, p. 454 (1873).

♂ Samkok, C. Siam, 21.6.15.

♂ juv. Hup Bon, S. E. Siam, 23.7.15.

♂ ♀ Klong Wang Hip, P. Siam, 2-3.10.15.

♀ Krabin, C. Siam, 12.11.15.

♀ Pak Jong, E. Siam, 3.12.15.

Streseman has dealt with these Cuckoos at some length in *Novitates Zoologicae*, vol. xx, p. 321, but his geographical ranges are very unsatisfactory. Manipur and Cachar, according to him, are occupied by different races. Mr. Herbert's specimens have the wings varying between 191 and 210 mm. (juv. ♂ 191 mm.) and the bills very large, ranging from 26 to 29 mm. if measured from the edge of the nostril, and up to 39 mm. if measured from the forehead to the tip. They have, of course, the interscapulars red, not black.

214. CENTROPUS BENGALENSIS.

Cuculus bengalensis. Gm. Sys. Nat. i, p. 412 (1788).

♂ ♀ Krabin, C. Siam, 1-6.11.15.

These specimens call for no remark.

215. PALÆORNIS CYANOCEPHALUS CYANOCEPHALUS.

Psittacus cyanocephalus, Linn. Syst. Nat. i, p. 141 (1766).

♂ ♀ Chan Teuk, E. Siam, 12.8.15.

These two birds call for no remark.

216. PALÆORNIS ALEXANDRI FASCIATA.

Psittacus fasciatus, Mull. S. N. Suppl., p. 746. f. (1776).

♂ Samkok, C. Siam, 20.6.15.

♂ ♀ Hup Bon, S. E. Siam, 16.7.15.

♂ ♀ Pak Jong, E. Siam, 16.8.15.

2 ♂ ♂ juv. 2 ♀ Krabin, C. Siam, 3-9.11.15.

The wings of the males run from 149 to 164 mm. and of the females from 143 to 156. The smallest adult male is 155 mm.

These birds are rather small when compared with North Indian and Burmese specimens, but are otherwise exactly similar. The females and young males have the bills wholly black as in true *fasciata*.

217. LORICULUS VERNALIS.

Psittacus vernalis, Sparrm. Mus. Carls., p. 29 (1787).

2 ♂ ♀ Hup Bon, S. E. Siam, 16-27.7.15.

♂ ♀ Pak Jong, E. Siam, 18-21.8.15.

♀ Klong Bang Lai, P. Siam, 20.1.16.

These little Lorikeets call for no remark. They are all quite typical.

It is very doubtful whether *pusillus* from Java, with its yellow throat, should be considered a sub-species of this bird, as the colour of this part in *Loriculus* seems to be of specific value, *i. e.*, bluish in *vernalis*, yellow in *pusillus* and red in *flosculus* and *exilis*, nor does there seem to be any running of the one into the other as one would expect in geographical races.

(*To be continued.*)

